

EXHIBIT A

Attorney Docket No. 100405-6205

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of: Sigal, et al.
Serial No: 09/896,962
Filed: June 29, 2001
For: **Methods And Apparatus For Improved
Luminescence Assays Using Microparticles**
Group Art Unit: 1656
Examiner: Unassigned

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SUPPLEMENTAL PRELIMINARY AMENDMENT

Assistant Commissioner for Patents
Washington, D.C. 20231

Sir:

Prior to the calculation of the fees due and the issuance of a first Office Action in this application, please amend the application by deleting original claims 1 and adding new claims 78- 98 as indicated below.

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IN THE CLAIMS

Pursuant to 37 C.F.R. § 1.121(c)(3), Applicants hereby submit a clean version of new claims 78-98 for the Examiner's convenience.

Please cancel claim 1 without prejudice or disclaimer and add the following new claims.

78. (New) A microparticle comprising a core and electrochemiluminescent moieties within said core.

79. (New) The microparticle of claim 78, wherein said electrochemiluminescent moieties are blended within said core.

80. (New) The microparticle of claim 78, wherein said core is polymeric and said electrochemiluminescent moieties are blended within said core.

81. (New) The microparticle of claim 78, wherein said core comprises plastic and said electrochemiluminescent moieties are blended with said plastic to form said core.

82. (New) The microparticle of claim 78, wherein said electrochemiluminescent moieties are enclosed within said core.

83. (New) The microparticle of claim 78, wherein said core is a liposome and said electrochemiluminescent moieties are enclosed within said liposome.

84. (New) The microparticle of claim 78, wherein said core comprises pores and said electrochemiluminescent moieties are enclosed within said pores.

85. (New) The microparticle of claim 78, wherein said electrochemiluminescent moieties comprises transition metals.

86. (New) The microparticle of claim 78, wherein said electrochemiluminescent moieties comprises Ru, Os, or Re.

87. (New) The microparticle of claim 78, wherein said core is electrically conductive.
88. (New) The microparticle of claim 78, wherein said core comprises metal.
89. (New) The microparticle of claim 78, wherein said core comprises gold, silver, platinum, palladium, zinc, iron, nickel, lead or copper.
90. (New) The microparticle of claim 78, wherein said core comprises gold, silver, platinum, or palladium.
91. (New) The microparticle of claim 78, wherein said core comprises gold.
92. (New) The microparticle of claim 78, wherein said core comprises carbon.
93. (New) The microparticle of claim 78, wherein said core comprises carbon black, graphitic nanotubes or fullerenes.
94. (New) The microparticle of claim 78, further comprising an assay ligand.
95. (New) The microparticle of claim 94, wherein said assay ligand is selected from the group consisting of proteins, nucleic acids, lipids, steroids, carbohydrates, porphyrins, alkaloids, nucleotides, nucleosides, amino acids, fatty acids, viruses, microorganisms, biological cells, and subcellular particles.
96. (New) The microparticle of claim 94, wherein said assay ligand is selected from the group consisting of proteins and nucleic acids.
97. (New) An assay composition comprising the microparticle of claim 1 and at least one assay component selected from the group consisting of electrochemiluminescence co-reactant and binding reagent.
98. (New) A method for conducting electrochemiluminescence measurements for a binding analyte-of-interest comprising the steps of:
 - (a) forming a complex comprising

- (i) said analyte.
- (ii) a microparticle comprising a core and electrochemiluminescent moieties within said core and having one or more copies of an assay-ligand immobilized on its surface; and
- (iii) an assay-ligand immobilized on an electrode.

(b) conducting an electrochemiluminescence measurement at said electrode in the presence of electrochemiluminescence reactants.

REMARKS

Pending claim 1 was cancelled without prejudice or disclaimer and new claims 78-98 are hereby submitted for the Examiner's consideration. No new matter has been added.

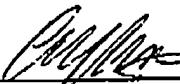
No marked up version of the claims are submitted since all of previously pending claims were cancelled. 37 C.F.R. § 1.121(c)(1)(ii).

Applicants believe these new claims 79-98 are patentable and in condition for allowance. These claims are supported in, for example, the specification (e.g., p. 20, lines 12-15), the examples and the original claims as filed.

Furthermore, Applicants are not aware of any prior art that has all of the elements of the claims or which in proper combination with other prior art would provide all of the elements of the claims. For example, none of the prior art teaches a microparticle comprising a core and electrochemiluminescent moieties blended within said core.

In view of the foregoing, Applicants respectfully submit that the claims are in condition for allowance and such action is earnestly solicited.

The Examiner is authorized to charge \$9.00 or any other deficient fee to Deposit
Account No. 50-0540 to cover the cost for a small entity of one extra claim in excess of twenty.

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